

The CentOS Project Changes

And how it's better for production kernels

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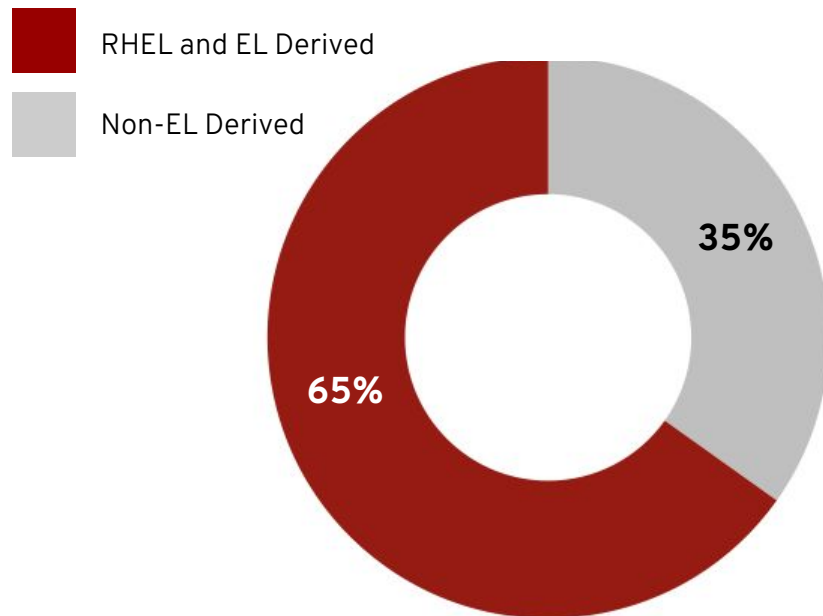
Brian Exelbierd

Communities/Developers

@bexelbie

Unit Share: Worldwide Linux Server Operating Systems

2020 Shipments



Notes: The data includes paid and non-paid hosts and guests from on- and off-premises locations.
Source: Red Hat Research with IDC (2021)

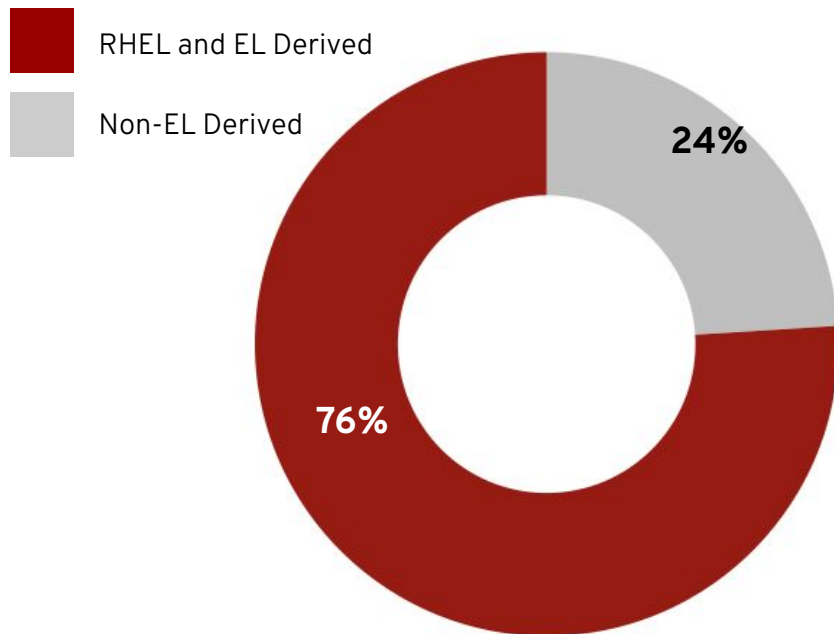
Production/Server Instances

RHEL and derivatives

Not laptops, some EDU/Research,
speciality hardware

Paid Unit Share: Worldwide Linux Server Operating Systems

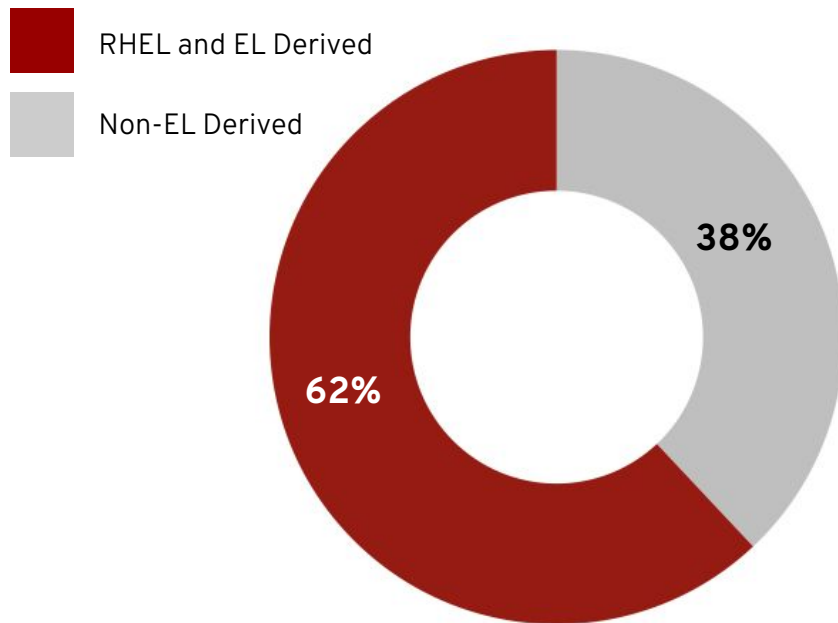
2020 Paid Shipments



Notes: The data includes paid hosts and guests from on- and off-premises locations.
Source: Red Hat Research with IDC (2021)

Nonpaid Unit Share: Worldwide Linux Server Operating Systems

2020 Nonpaid Shipments



Notes: The data includes non-paid hosts and guests from on- and off-premises locations.
Source: Red Hat Research with IDC (2021)

Enterprise Linux ecosystem (circa 2014)



Fedora Linux



Red Hat Enterprise Linux



CentOS Linux

Linux kernel

Community space

Private space

Partner, upstream, community



Audience:

- ▶ Developers



Focus:

- ▶ Operating system innovation
- ▶ Architecture changes



Pace:

- ▶ Fast moving: major release every 6 months



Audience:

- ▶ Enterprises
- ▶ Application development partners



Focus:

- ▶ Stability, security, and performance



Pace:

- ▶ Predictable release cadence



Audience:

- ▶ Cost-sensitive users
- ▶ Ecosystem developers



Focus:

- ▶ No cost and easy to acquire



Pace:

- ▶ Released several months after Red Hat Enterprise Linux

Enterprise Linux ecosystem (2022+)



Fedora Linux



CentOS Stream



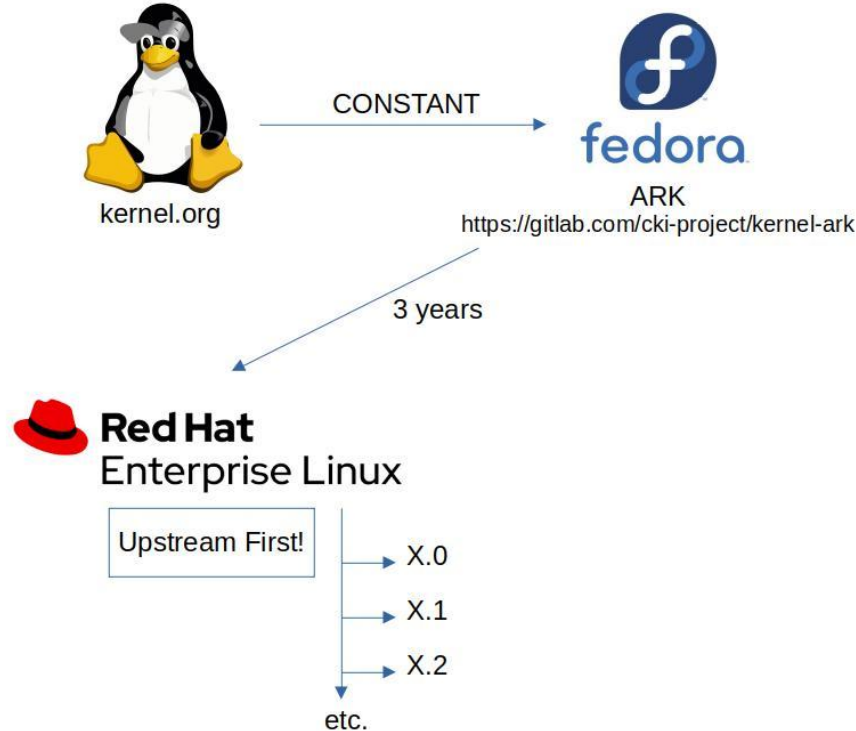
Red Hat Enterprise Linux

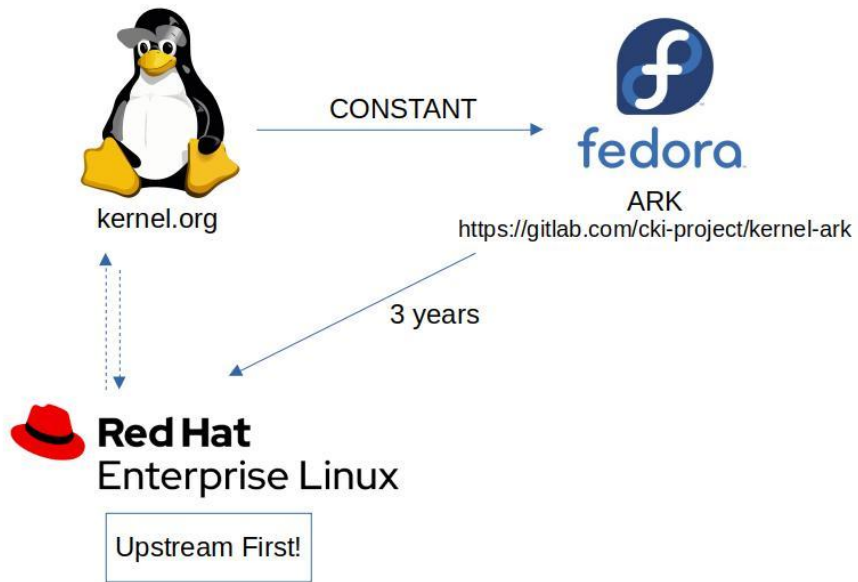
Linux kernel	Community space	Shared space	Private space
	<ul style="list-style-type: none">▶ Contributions welcomed and encouraged▶ A packaged integration of upstream▶ Take risks, do experiments▶ An open source community▶ Focused on more than the enterprise <hr/> <ul style="list-style-type: none">👤 Operating system developers🔍 OS innovation, architecture changes🕒 Fast moving, major release every 6 months	<ul style="list-style-type: none">▶ Contributions welcomed and encouraged▶ Variants are encouraged through SIGs▶ Contributions curated by Red Hat▶ Continuously delivers the next minor version of Red Hat Enterprise Linux▶ Focused on the future of the enterprise <hr/> <ul style="list-style-type: none">👤 Community and partners🔍 Develop, test, and contribute to the next version of Red Hat Enterprise Linux🕒 Continuous stream of new content	<ul style="list-style-type: none">▶ Private until after release▶ NDA and CVE work▶ Accessible only via subscription▶ Focused on today's enterprise▶ Life cycle management, including the ability to pin to a minor release▶ Errata feeds that contain only fixes, not features <hr/> <ul style="list-style-type: none">👤 Red Hat Enterprise Linux customers and partners🔍 Stability, security, performance🕒 Predictable release cadence



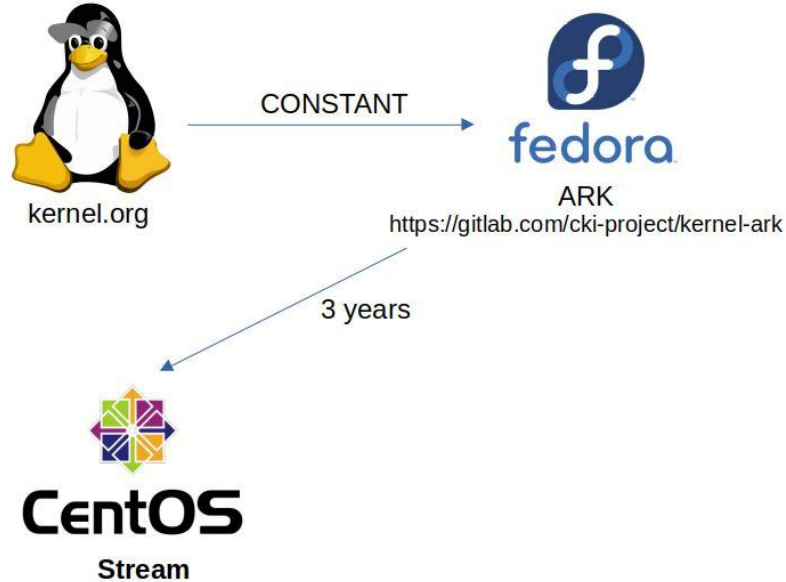
My God,
It's full of **kernels** ...

Kernel Workflow Circa April 2020

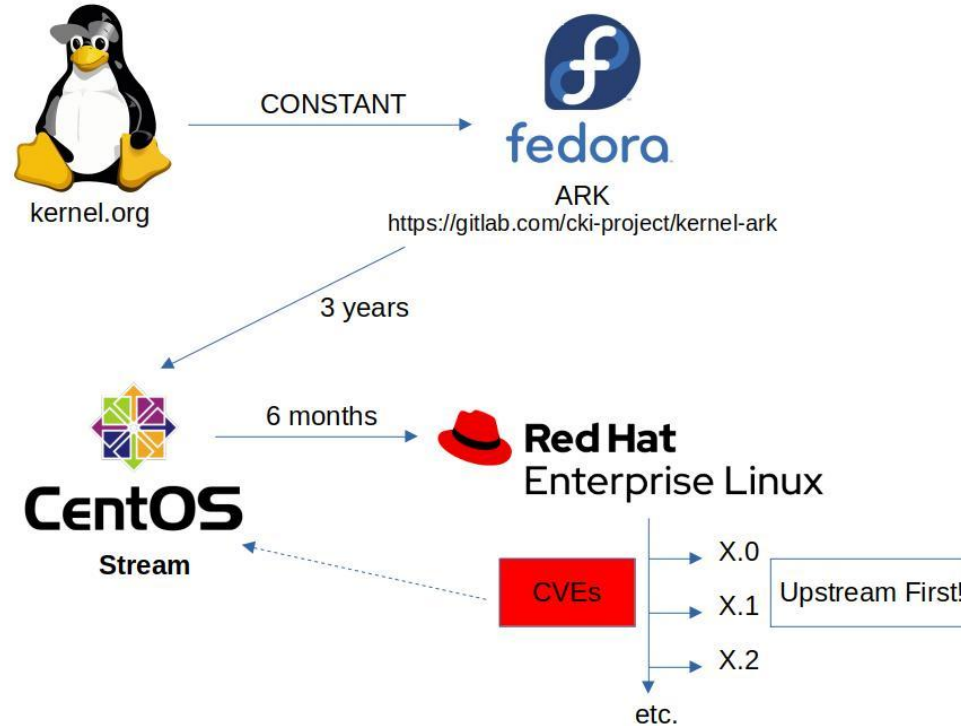




Kernel Workflow Today



Kernel Workflow Today



Testing Infrastructure

Faster Time to Production

RHEL not required







Source: <https://avopix.com/photo/410065-mechanic-using-laptop-while-servicing-car-engine>

65% of kernels are EL influenced

Fedora and CentOS now lead RHEL

CentOS eases development

Code moves faster to production

ONE DOES NOT SIMPLY



"FORGET" ACE OF BASE